

**Federal Columbia River Power System Biological Opinion  
and  
the Bureau of Reclamation's Subbasin Habitat Program**

**Joe Spinazola  
Idaho Bureau of Reclamation  
1150 N Curtis Rd – Suite 100  
Boise, ID 83706-1234  
Phone: 208-378-5378  
Fax: 208-378-5191  
jspinazola@pn.usbr.gov**

By the end of the 20<sup>th</sup> century, twelve stocks of salmon and steelhead in the Columbia River basin were listed as threatened or endangered under the Endangered Species Act. Operation of Federal dams on the Columbia River was determined to jeopardize the continued existence of 8 of those salmon and steelhead stocks.

A series of biological opinions issued by National Marine Fisheries Service in 1992, 1993, 1994, 1995, 1998, and 2000, specified activities for Bonneville Power Administration, Corps of Engineers, and the Bureau of Reclamation that allow continued operation of the Federal dams and avoid jeopardy to salmon and steelhead. Activities in the earlier biops focused mostly on main stem hydro-system functions such as delivering and shaping flows, introducing spill to aid juvenile migration, barging smolts, and making structural modifications to the facilities.

The most recent biop includes 199 specific activities that address hydro-system operation, hatcheries, harvest, and habitat in a reasonable and prudent alternative. Of those 199 activities, Reclamation is involved with about 50. Of those 50, Reclamation is very involved with one that relates to the subbasin habitat program.

Reclamation's role in the subbasin habitat program is to address all barrier, screen, and flow deficiencies in 15 priority subbasins. The program to implement this action was designed to start in three subbasins in 2001 and to add three more subbasins each year until activities are underway in all 15 subbasins. The program is directed to address all deficiencies within 10 years of initiating work in each subbasin.

There are some qualifications associated with barrier, screen, and flow projects to avoid overlap with ESA responsibilities of State and other Federal agencies. Reclamation is limited to working with willing landowners on private lands. Barrier and screen projects must be directly related to the withdrawal of water. Landowners retain ownership of any structures and are responsible for operation and maintenance. Flow projects consist mostly of short and long-term leases conducted in full compliance with State laws.

Reclamation currently provides technical assistance in the form of project marketing and planning, engineering designs, environmental compliance, permit acquisition,

construction inspection for screen and barrier projects but currently is unable to fund project construction. Reclamation can fund water acquisition.

To date Reclamation has partnered with landowners, Tribes, and numerous local, State, and other Federal agencies to complete dozens of barrier, screen and flow projects in nine subbasins in Idaho, Oregon, and Washington. These subbasins are the Lemhi, Upper Salmon, and Little Salmon subbasins in Idaho; the Methow, Entiat, and Wenatchee in Washington; and the North Fork, Middle Fork, and Upper main stem of the John Day River in Oregon.

Projects to address barriers include replacement of temporary gravel push-up dams annually placed in the stream to facilitate the diversion and use of water for irrigation and other purposes with permanent structures designed to pass fish at all flows. These structures incorporate step pools and can be constructed of rock to blend with the environment. In some cases diversion dams have been removed entirely and consolidated at a single diversion point. Screens are structures constructed in a diversion canal that return fish that enter the diversion back to the river. A few short-term leases have kept water in streams to meet fish migration, spawning, and rearing needs.

Reclamation involvement with scores of others has helped make positive improvements in the survival of threatened and endangered salmon and steelhead in the subbasins where we work.

For more information please contact:

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Phone: 208-378-5378  
Fax: 208-378-5191  
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